

Three New North American Malthini¹

(Coleoptera: Cantharidae)

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This study was prepared to make available names and descriptions of three species of the Malthini. I am most grateful to Drs. H. H. Ross and M. W. Sanderson of the Illinois Natural History Survey for the loan of specimens from which the types of the first species were found. I am greatly indebted to Dr. C. P. Alexander, Amherst, Massachusetts, for his donation of many valuable specimens to my collection, among which were the types of the other two species.

Malthinis georgiensis Fender, new species

(Figs. 1, 2)

Black. Head in front of the antennae flavotestaceous, gradually darkening behind, becoming black on the neck. Abdomen piceous, the ventral accessory process of the male apically testaceous. Pubescence cinereous. Length 2.5 mm.

MALE.—Shining. Head orbicular, very finely sparsely punctured, a little more coarsely closely so behind; mandibles each with a single internal tooth; eyes small and remote, feebly prominent; antennae slender, extending to the tip of the abdomen, second and third segments subequal, the intermediate segments about three and a half times as long as wide. Pronotum transverse, about a third wider than long, the margins rather widely beaded with the beads flattened on top, the anterior margin broadly shallowly arcuate, the anterior angles rounded, the sides arcuate and converging slightly to the obtusely rounded hind angles, the basal margin more strongly arcuate than the anterior margin; surface finely sparsely punctured, a median circular impression at the basal third; at the apical third, a transversely ovate impression towards each side. Scutellum short, semi-circular, the surface finely rugose-punctate. Elytra abbreviated, extending to the middle of the third abdominal segment, finely rugose and rather coarsely sparsely punctured to the feebly terete and more closely punctured apices. Meso- and metasterna finely, very sparsely punctured; the abdominal sternites finely rugose-punctate. Sixth sternite widely, moderately deeply arcuately emarginate, apically narrowed; seventh sternite apically narrowed, the apex with a narrow, moderately deep V-shaped incision, the sides of the segment arcuately converging apically; ultimate tergite feebly extended beyond the penultimate, apically rounded; ventral accessory process subdigitately produced, the apex subtruncate in lateral view. Pubescence fine, moderately thick, suberect, and inconspicuous.

FEMALE.—Similar to the male. Antennae extending to about the middle of the third abdominal segment, the intermediate segments about two and a half times as long as wide. Pronotum with an additional median impression at the apical fourth. Elytra shorter, extending to the base of the third abdominal segment.

¹ Supported by National Science Foundation grant GB-4097.

Holotype male.—ATHENS, GEORGIA, IN GEORGIA CEMETERY, 50-year-old pine, 7-19-43, accession #S614. Allotype female. Duke Forest, Durham, North Carolina, oak-hickory-pine, 7-23-43, accession #S942. No collector for either. Types in the collection of the Illinois Natural History Survey.

This species may at once be separated from other known North American species by the black pronotum, the surface of which is not finely granulose. It appears to be nearest *Malthinus quadrimaculatus* Fender (1963) which has the pronotum black with four discal spots and the apical and basal margins pale; the apex of the seventh sternite very narrowly incised with the sides of the segment sinuately convergent.

***Malthinus alexanderi* Fender, new species**

(Figs. 3-6)

Black. Head in front of the antennae castaneous, becoming paler towards the sides; beneath widely flavotestaceous along the gular sutures. Pronotum castaneous to flavocastaneous (the angles more or less widely paler in the females). Elytra with the apices creamy yellow. Abdominal sternites brownish with the apical margins more or less widely testaceous. Trochanters, apices of the coxae, and bases of the femora of front and middle legs pale; apices of the profemora pale; apices of the metacoxae obscurely paler. Pubescence cinereous. Length 3.5 to 4.5 mm.

MALE.—Head in front of the eyes shining and impunctate, alutaceous and finely sparsely punctured behind; the eyes moderately large and prominent; the antennae slender, extending to the tips of the wings in repose, the second segment slightly shorter than the third, the intermediate segments about five times as long as wide. Pronotum shining, narrower than the head, the anterior margin straight medially, then arcuately bent back to the sharply rounded anterior angles; the sides feebly sinuate, converging to the obtusely rounded and shallowly reflexed hind angles; the basal margin strongly arcuate; all the margins rather thickly beaded; the surface finely, moderately closely punctured; a broad U-shaped elevation with the base just anterior to and abutting the basal bead, the arms extending to the middle; inside this elevation a median small circular impression. Elytra abbreviated, one and a half times as long as their combined widths, extending to about the middle of the second abdominal sternite, finely sparsely punctured basally, becoming finely rugose-punctate to the feebly tumid and finely punctured apices; with a subsutural and two discal costae extending from near the base, nearly to the tumidities. Body beneath shining, the thorax finely sparsely punctured, the abdominal sternites similarly punctured and with fine transverse rugae, fourth and fifth sternites each with an apical membraneous area extending to the lateral third; sixth sternite broadly, deeply, arcuately emarginate, seventh sternite sub-elliptical, the apex with a small V-shaped incision; above this a broad, apically truncated ventral process; above this a strongly sinuate, caudally produced median process, apically forked, the forks adherent to the sharply rounded apices; terminal tergites feebly produced, otherwise normal. Pubescence fine, sparse and inconspicuous.

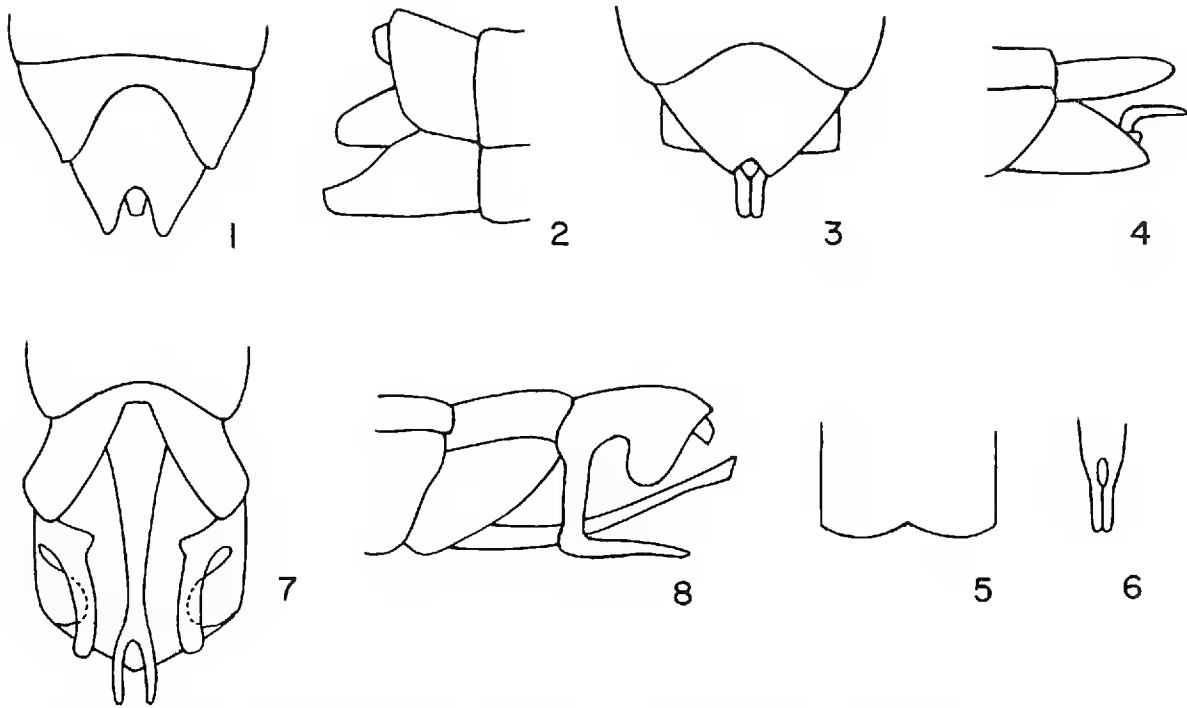


FIG. 1. Terminal abdominal segments of *Malthinus georgiensis*, ventral aspect. FIG. 2. Same, lateral aspect. FIG. 3. Same of *Malthinus alexanderi*, ventral aspect. FIG. 4. Same, lateral aspect. FIG. 5. *M. alexanderi*, subventral accessory process. FIG. 6. Same, median accessory process. FIG. 7. *Malthodes sanbernadensis*, terminal abdominal segments, ventral aspect. FIG. 8. Same, lateral aspect.

FEMALE.—Similar to the male. The coloration differing as noted above. The eyes smaller and less prominent. The elytral costae feebly indicated. The apical abdominal sternites black.

Holotype male, allotype female, and three paratypes, SOUTH FORK OF LAVA CREEK, SOUTHWEST RESEARCH STATION, CHIRICAHUA MOUNTAINS, ARIZONA, 6 August 1957, 5,100 feet, collected by C. P. Alexander, for whom it is named.

This species keys out to *Malthinus subcostatus* Schaeffer, from which it may be differentiated by the pronotal coloration and sculpture and the quite different apical abdominal segments. In *M. subcostatus*, the pronotum is flavous and not sculptured. The accessory abdominal process originates from the last tergite and the arms are contorted and apically crossed.

***Malthodes sanbernadensis* Fender, new species**

(Figs. 7, 8)

Black. Mandibles yellowish brown. Pronotum semitranslucent so that bases of elytra and neck show through as blackish areas, otherwise flavous with the apical angles and apical half of the side margins black. Scutellum piceous. Elytra piceous, obscurely paler medially. Fifth abdominal sternite with the apical margin narrowly pale medially; sixth sternite pale medially, this pale extending partway down the sides of the emargination; seventh sternite flavous to flavo-piceous;

ultimate tergite and produced sidepieces of the penultimate tergite flavous. Pubescence cinereous. Length 3.5 to 4.5 mm.

MALE.—Shining. Head wider than the pronotum, impunctate in front of the antennae, finely sparsely punctured behind; eyes large and prominent; antennae slender, extending to the tip of the abdomen, second and third segments equal, the intermediate segments about five times as long as wide. Pronotum transverse, all margins narrowly beaded, more widely so at the anterior angles, anterior margin nearly straight, the anterior angles obliquely rounded; sides nearly parallel, faintly concave; basal angles obliquely rounded, feebly prominent, the basal margin rather strongly arcuate medially, becoming nearly straight towards the sides; surface very finely sparsely punctured. Scutellum semicircular, finely punctured. Elytra extending to the base of the fifth abdominal sternite, finely closely rugose-punctate. Body beneath finely sparsely punctured, the basal abdominal sternites finely rugose-punctate; fifth sternite apically broadly shallowly emarginate; sixth sternite widely deeply emarginate, the emargination apically truncate and extending nearly to the base of the segment; seventh sternite elongate, slender, extending beyond the sixth for more than half its length, the apex rather narrowly deeply forked, at the point of furcation narrowly U-shaped. In lateral view; seventh sternite shallowly arcuately bent up, the apices of the forks bevelled beneath; penultimate tergite with the basal portion of the sides produced ventrad as a narrow digitate process, medially elbowed and caudally produced; the apical portion of the sides produced ventrad in a semicircular manner; ultimate tergite small, subovate, feebly produced. Pubescence fine, sparse and inconspicuous.

FEMALE.—Similar to the male. Head about as wide as the pronotum; the eyes smaller and less prominent; antennae shorter, extending to the apex of the metasternum, the intermediate segments about two and a half times as long as wide. Terminal abdominal segments normal for the sex.

Holotype male, allotype female, and 8 male and 11 female paratypes: SEVEN OAKS, SAN BERNARDINO MOUNTAINS, SAN BERNARDINO COUNTY, CALIFORNIA, 23 May 1963 collected by C. P. Alexander. Types temporarily in the writer's collection.

This species is most closely related to *Malthodes blackwelderi* Fender (1951) from which it may be distinguished by the seventh sternite being forked rather than with a shallow U-shaped notch and the presence of an apical semicircular production of the sidepieces of the penultimate tergite in addition to the basal elbowed digitate extension.

LITERATURE CITED

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